

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A polishing method for polishing a workpiece, comprising:

pressing a workpiece against a polishing surface of a polishing tool containing a resin to bring the workpiece into sliding contact with said polishing tool, thereby polishing the workpiece with abrasive particles;

wherein at least a part of said polishing tool is kept at a temperature lower than a glass transition temperature of said polishing tool throughout the period of time during which the workpiece is pressed against said polishing surface of said polishing tool.

2. (Previously Presented) A method according to claim 1, wherein said polishing surface of said polishing tool is kept at said temperature lower than the glass transition temperature of said polishing tool.

3. (Previously Presented) A method according to claim 1, wherein a table or a base plate on which said polishing tool is mounted is cooled to cool said polishing tool or regulate the temperature of said polishing tool to said temperature lower than the glass transition temperature of said polishing tool.

4. (Previously Presented) A method according to claim 1, wherein a polishing liquid having a temperature lower than the glass transition temperature of said polishing tool is supplied to said polishing surface while the workpiece is being polished.

5. (Original) A method according to claim 4, wherein said polishing liquid comprises cold water or a chemical liquid.

6. (Previously Presented) A method according to claim 1, wherein a dressing liquid having a temperature lower than the glass transition temperature of said polishing tool is supplied to said polishing surface while said polishing surface is being dressed.

7. (Previously Presented) A method according to claim 1, wherein a surface of the workpiece being polished is cooled to cool the surface of the workpiece or to regulate the temperature of the surface of the workpiece, thereby cooling said polishing tool or regulating the temperature of said polishing tool to said temperature lower than the glass transition temperature of said polishing tool.

8. (Previously Presented) A method according to claim 1, further comprising:
holding a processing assistance member in contact with said polishing surface;
and

cooling said processing assistance member or regulating the temperature of said processing assistance member to keep said polishing tool at said temperature lower than the glass transition temperature of said polishing tool.

9. (Original) A method according to claim 8, wherein said processing assistance member comprises a dresser for dressing said polishing tool or a member attached to said dresser, said dresser or said member being held in contact with said polishing tool.

10. (Previously Presented) A method according to claim 8, wherein said processing assistance member is operable independently of a dresser for dressing said polishing tool and a holder for holding the workpiece, and said processing assistance member is held in contact with said polishing tool.

11. (Original) A method according to claim 8, wherein said processing assistance member is attached to a holder for holding the workpiece and held in contact with said polishing tool.

12. (Currently Amended) A polishing method for polishing a workpiece, comprising:

pressing a workpiece against a polishing surface of a polishing tool containing a resin to bring the workpiece into sliding contact with said polishing tool, thereby polishing the workpiece with abrasive particles;

wherein a processing circumstance is kept at a temperature lower than a glass transition temperature of said polishing tool throughout the period of time during which the workpiece is pressed against said polishing surface of said polishing tool.

13. (Currently Amended) A polishing apparatus for polishing a workpiece, comprising:

a polishing tool containing a resin;

a holder for holding and pressing a workpiece against said polishing tool to bring the workpiece into sliding contact with said polishing tool, thereby polishing the workpiece with abrasive particles;

a temperature regulating device for keeping said polishing tool at a temperature lower than a glass transition temperature of said polishing tool throughout the period of time during which said holder presses the workpiece against said polishing tool.

14. (Previously Presented) An apparatus according to claim 13, wherein said temperature regulating device cools a table or a base plate on which said polishing tool is mounted to cool said polishing tool or regulate the temperature of said polishing tool to said temperature lower than the glass transition temperature of said polishing tool.

15. (Previously Presented) An apparatus according to claim 13, wherein a polishing liquid having a temperature lower than the glass transition temperature of said polishing tool is supplied to said polishing surface while the workpiece is being polished.

16. (Original) An apparatus according to claim 15, wherein said polishing liquid comprises cold water or a chemical liquid.

17. (Previously Presented) An apparatus according to claim 13, wherein a surface of the workpiece being polished is cooled to cool the surface of the workpiece or to regulate the temperature of the surface of the workpiece, thereby cooling said polishing tool or regulating the temperature of said polishing tool to said temperature lower than the glass transition temperature of said polishing tool.

18. (Previously Presented) An apparatus according to claim 13, further comprising:

a processing assistance member which is brought in contact with said polishing surface; and

a temperature regulating device for cooling said processing assistance member or regulating the temperature of said temperature regulating device to keep said polishing tool at said temperature lower than the glass transition temperature of said polishing tool.

19. (Original) An apparatus according to claim 18, wherein said processing assistance member comprises a dresser for dressing said polishing tool or a member attached to said dresser, said dresser or said member being held in contact with said polishing tool.

20. (Previously Presented) An apparatus according to claim 18, wherein said processing assistance member is operable independently of a dresser for dressing said polishing tool and a holder for holding the workpiece, and said processing assistance member is held in contact with said polishing tool.

21. (Original) An apparatus according to claim 18, wherein said processing assistance member is attached to a holder for holding the workpiece and held in contact with said polishing tool.

Claims 22-29 (Cancelled).

30. (New) A method according to claim 1, wherein said at least a part of said polishing tool is cooled so as to be kept at said temperature lower than the glass transition temperature of said polishing tool.

31. (New) A method according to claim 12, wherein said processing circumstance is cooled so as to be kept at said temperature lower than the glass transition temperature of said polishing tool.

32. (New) An apparatus according to claim 13, wherein said temperature regulating device is operable to cool said polishing tool so as to keep said polishing tool at said temperature lower than the glass transition temperature of said polishing tool.